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**TOTAL ARMY QUALITY:
TQM OR SOMETHING ELSE?**

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BY

LIEUTENANT COLONEL ROBERT R. MURFIN
United States Army

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TOTAL ARMY QUALITY:

TQM OR SOMETHING ELSE?

AN INDIVIDUAL STUDY PROJECT

by

Lieutenant Colonel Robert R. Murfin
United States Army

Colonel William W. Larsen
Project Adviser

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ABSTRACT

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The Army has been directed by the Department of Defense (DOD) to change corporate management philosophy and practices by adopting Total Quality Management (TQM) as espoused by W. Edwards Deming and others. Total Army Quality (TAQ) is the Army's new management philosophy, responding to the DOD TQM mandate. TQM gurus prescribe revolutionary change that transforms management and organizations. Such an institutional metamorphosis portends modification of shared assumptions, attitudes, beliefs, and expectations of soldiers. That is, a significant change of the Army's culture. Indeed, the DOD TQM Master Plan's long-range goals focus on long-term cultural changes as the principal desired outcome of TQM within DOD. This study summarizes the key principles of TQM as articulated by Dr. Deming, postulates significant aspects of organizational culture fostered by prescribed TQM principles, identifies pertinent aspects of extant Army culture, and compares the postulated TQM culture with Army culture. The study concludes that while there are some areas of mutual reinforcement, TQM and Army cultures are absolutely incompatible in several core aspects. Either the Army will literally reinvent itself with new attitudes, assumptions, beliefs, and expectations; or, the Army must invent a series of TQM hybrids that will bear little resemblance to TQM as described by Dr. Deming.

INTRODUCTION

Total Army Quality (TAQ) is the Army's adaptation of Total Quality Management (TQM) philosophy. TQM requires transforming changes in existing leadership philosophy and practices. This potential reformation of Army management and leadership philosophy suggests similarly dramatic impact on the organization's basic assumptions, attitudes, beliefs, and expectations--the Army's culture. This study compares significant elements of TQM and Army cultures in order to draw conclusions about the potential impact of TAQ implementation on the Army.

BACKGROUND

The Army has been directed by the Department of Defense (DOD) to change corporate management philosophy and practices by adopting TQM as espoused by W. Edwards Deming, Joseph M. Juran, and others.¹ While any meaningful change in an organization as large as the Army is a significant challenge, implementation of TQM is especially daunting. The experts advocate a near metamorphosis.

Deming is completely candid in his assessment that American philosophy and styles of management must be completely transformed rather than revised.² Juran similarly asserts that more intense application of traditional management methods is inadequate and that a lengthy, complex revolution is required.³

TAQ is the Army's new management philosophy, responding to the DOD TQM mandate.⁴ TAQ "requires a redefining of current management practices and...learning new behaviors," according to

Army leadership.⁵ TAQ encompasses both leadership of people and management of resources.⁶ The Army Chief of Staff writes that "implementation of TAQ philosophy is not optional and will be tailored by each organization."⁷

The revolutionary or transforming change explicitly advocated by TQM gurus and embraced by Army leadership is intended to modify management behavior within the Army. However, control of change is often more in the mind of managers than in the realm of reality.⁸ Once initiated, the rate of change may well be exponential⁹ with second and third order effects wholly unanticipated by even the most astute managers.¹⁰ The pervasive nature of the change inherent in TQM has clear potential to modify the shared assumptions, attitudes, beliefs, and expectations of soldiers. That is, to change the Army's culture.¹¹

Indeed, the DOD TQM Master Plan's major long-range goals focus on long-term cultural changes as the principal desired outcome of TQM within the Department of Defense.¹² In contrast, the Army intends that its new management philosophy support a culture based on its present and enduring institutional ethic and individual values.¹³

It could be argued that this is the wrong time to implement a radical change in Army management and leadership philosophy. Many consider the United States Army to be the best in the world.¹⁴ The Army Chief of Staff asserts, "We are at the peak of our effectiveness...the Army holds a warfighting edge--an effectiveness advantage--over our opponents."¹⁵

The Army intends to use TAQ methods, tools, and techniques "to improve quality, reduce waste, simplify processes, eliminate layering, and improve overall performance," according to one Army Publication.¹⁶ The purpose is to use TAQ to facilitate restructuring of the force while sustaining capability and readiness in a period of international uncertainty and reduced resources.¹⁷ Understanding the likely--if unintended--changes to the Army's culture inherent in the inculcation of TQM principles is essential if the Army and the nation are to be well served by Total Army Quality.

PURPOSE

This study undertakes four principal tasks: (1.) summarizing the key principals of TQM, (2.) postulating significant aspects of organizational culture fostered by prescribed TQM principles, (3.) identifying pertinent aspects of extant Army culture, and (4.) comparing TQM culture with Army culture. The purpose is to draw conclusions concerning the potential impact of TAQ--the Army's implementation of TQM philosophy--on the Army.

SCOPE AND LIMITATIONS

The examination of TQM will focus on management principles articulated by Dr. Deming. This is because he is widely considered to be the developer of TQM¹⁸ and his work is identified as a foundation for DOD TQM efforts.¹⁹ Additionally, Deming is recognized as a synthesizer, incorporating most of the concepts of other quality management theorists.²⁰ His concept is arguably the most "total" and has been extensively examined, critiqued, and explained by others.²¹

The assessment of Army culture will focus on that part of the active Army that fights or provides direct support to combat forces. This encompasses more than half of the organization and is characterized by units and headquarters through corps with a high density of soldiers. The Army exists to recruit, train, equip, and sustain these organizations. The significant majority of Army leaders--both officer and enlisted--grow up within these units, taking with them learned attitudes and beliefs as they move to more senior leadership positions throughout the Army. Explicitly excluded from consideration are those Army communities focused on acquisition, business activities, and similar missions. These organizations are important parts of the Army; however, the preponderance of civilian employees within these categories suggests that their cultures might diverge from that of the warfighting Army, and should be studied separately.

"Culture does not reveal itself easily...to articulate and describe it requires great patience and effort," according to Edgar H. Schein, an organizational culture expert.²² This study is intentionally limited to examining only the most self-evident and, hopefully, most significant cultural traits of TQM. Similarly, only those aspects of Army culture most likely to be affected by TQM will be identified and discussed. An exhaustive articulation of either Army or TQM cultures is beyond the scope of this study, and would tend to obscure rather than clarify the potential impact of TAQ on the Army's culture.

ASSUMPTIONS AND DEFINITIONS

The existence of organizational culture in general, and

specifically, of an Army culture--originating in warfighting organizations and permeating to some extent throughout the Army--is assumed. This is consistent with a significant body of research²³ and is tacitly acknowledged by the Army.²⁴ Detailed documentation of an Army culture is properly the subject of separate studies and is beyond the scope of this effort.

For the purposes of this study a synthesis of organizational culture definitions will serve as the basis for discovering and discussing the significant aspects of both TQM and Army cultures. Thus, culture is defined as the learned assumptions, attitudes, beliefs, and expectations perpetuated by inculcation of new members to the norms and rules of the work group.²⁵ While some cultural elements might be documented by an organization, they are most often discovered by careful observation and interpretation of an organization's history, structure, legends, and corporate behavior.²⁶

TQM PRINCIPLES

In order to deduce the cultural traits potentially induced by TQM practices, it is necessary to reach a common understanding of the essential principles of TQM. At first glance this does not seem too difficult. Dr. Deming has condensed the TQM theory of management into 14 points that "apply anywhere, to small organizations as well as to larger ones, to the service industry as well as to manufacturing."²⁷ As a point of departure for this study, Deming's 14 points, in his words, follow:

1. Create constancy of purpose toward improvement of

product and service, with the aim to become competitive and to stay in business, and to provide jobs.

2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.

3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.

4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move toward a single supplier for any one item, on a long-term relationship of loyalty and trust.

5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease costs.

6. Institute on the job training.

7. Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.

8. Drive out fear, so that everyone may work effectively for the company.

9. Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.

10. Eliminate slogans, exhortations, and targets for the work force asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.

11.a. Eliminate work standards (quotas) on the factory floor. Substitute leadership.

b. Eliminate management by objective (MBO). Eliminate management by numbers, numerical goals. Substitute leadership.

12.a. Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.

b. Remove barriers that rob people in management and in engineering of their pride of workmanship. This means, inter alia, abolishment of the annual or merit rating and or MBO.

13. Institute a vigorous program of education and self-improvement.

14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's job.²⁸

DEADLY DISEASES

To complement and amplify the 14 points as they pertain to his view of Western management practices, Deming has enumerated seven "deadly diseases." To complete our baseline, the diseases follow:

1. Lack of constancy of purpose to plan product and service that will have a market and keep the company in business, and provide jobs.
2. Emphasis on short-term profits: short-term thinking (just the opposite from constancy of purpose to stay in business), fed by fear of unfriendly takeover, and by push from bankers and owners for dividends.
3. Evaluation of performance, merit rating, or annual review.
4. Mobility of management; job hopping.
5. Management by use of only visible figures, with little or no consideration of figures that are unknown or unknowable.
6. Excessive medical costs.
7. Excessive costs of liability, swelled by lawyers that work on contingency fees.²⁹

If the preceding points and diseases appear to present ambiguities, redundancies, and even contradictions, it is probably because "Deming's writings are neither fluid nor tightly structured," in the rather generous assessment of one critic.³⁰ As a result, a whole host of academics and management practitioners have offered analysis, amplification, or explanation of Deming's basic work.³¹ Deming, himself, devotes almost one quarter of Out of the Crisis, his seminal work on TQM, to elaboration of the points and diseases, and the remainder of the book to illustrative examples.

TQM PRINCIPLES RESTATED

Borrowing liberally from several of the more widely cited of Deming's interpreters, as well as from Deming himself, the basic

principles of TAQ (aka: TQM) might be briefed to junior officers and noncommissioned officers as follows:

- The Army must dramatically change the way that leaders (and managers) think and act.³²

- Leaders must be personally committed to and accountable for long-term survival and success of their specific organization and the Army.³³

- Short-term leadership actions must be consistent with and supportive of long-range goals.³⁴

- To be successful, organizations must deliver products (or services) of quality to customers.³⁵

- The customer decides what constitutes quality by either using the product or ignoring it, ie, customers vote with their feet.³⁶

- Products (services) are delivered by systems.³⁷

- Quality is obtained by controlling variation of inputs to and processes of the system at each level and stage to achieve system stability.³⁸

- Cheapest is not always best. The "bottom line" is generally inadequate as a sole determinant for awarding contracts or assigning missions. Demand quality from suppliers of goods and services.³⁹

- Soldiers and Army civilians work within systems. When quality slips a system input or process--not the people--is almost always the cause.⁴⁰

- Careful measurement of inputs and processes can show where and what to correct or to improve.⁴¹

- Quantified objectives for system outputs and measurement of system outputs do not contribute to quality.⁴²
- Periodic evaluation of individual output does not contribute to quality.⁴³
- People must be trained to do their jobs so that they can contribute to system stability.⁴⁴
- Everyone must contribute to improving inputs and processes to achieve and improve systems stability.⁴⁵
- No one will lose their livelihood because of improvements to increase quality. Workers will be retrained and provided new jobs.⁴⁶

SUMMARY OF TQM PRINCIPLES

As can be seen from Deming's points and diseases as restated, above, TQM focuses on users--called customers--of products or services; aims to create stable systems by controlling the variability of materials and other inputs; constantly strives to improve system processes; trains and retrain workers, permitting them to contribute to a continually improving work environment; provides a secure source of employment for productive workers; and requires leaders and managers that are committed to long-term organization success. TQM disavows outcome oriented management as counterproductive to long-term organizational health. MBO is explicitly condemned as futile. Similarly rejected are measurement of individual worker output and periodic rating of individual performance.

TQM CULTURE

These basic principles of TQM show both instances of similarity to and divergence from accepted Army management philosophy and practice. However, the philosophy and specific management practices prescribed by Deming as necessary to transform American management, clearly imply a set of organizational assumptions, attitudes, beliefs, and expectations.

CUSTOMER IS THE BOSS

Central to TQM is the concept of "customer." It is widely accepted that a TQM customer is anyone or any organization that uses a product or service.⁴⁷ This certainly describes the standard relationship of buyers choosing between or among suppliers, and in that context, the importance of customers is easily understood. The definition is broader; however, incorporating the concept of "internal" customers, ie, the parts of an organization that use the products or services supplied by other elements of the same, larger organization.

Deming clearly emphasizes the more limited customer. Specifically, the importance of the customer, according to Deming, is that "an unhappy customer will switch. Unfortunately, a satisfied customer may also switch," for one of several reasons.⁴⁸ While Deming discusses the importance of internal customers, his principal focus is on customers who may choose between suppliers and can switch. Almost by definition, internal customers usually may not choose between suppliers, being constrained by institutional policy to use the products and services provided by other elements of the larger organization.

A reasonable inference is that a consistent, overriding emphasis on satisfaction of customers from outside the organization will impact on organizational culture. The most readily apparent potential effect is an external focus, a belief that customer values are most important. Unless a customer wants something that is either immoral or illegal, then the customer's value must supersede that of management. This both enjoins managers to ensure that "the consumer is the most important part of the production line,"⁴⁹ and creates a cultural trait that presumes crucial values lie beyond corporate wisdom. That is, the boss doesn't know everything until the boss knows what the customer knows. In an organization practicing TQM philosophy, the elemental expectation is that managers will "discover" customer values and align the organization with the customer definition of quality.

MANAGEMENT PROVIDES STABILITY

The first of Deming's 14 points addresses the need to look beyond the immediate problems of day to day management. He asserts that constancy of purpose requires a management dedicated to the health of the organization 10-30 years in the future.⁵⁰ In assessing the problems with Western management Deming asks, "But how can anyone be committed to any policy when his tenure is only a few years, in and out?"⁵¹ Based on extensive interviews with Dr. Deming, Mary Walton quotes him saying, "Because corporate managers change jobs every two or three years, their interests are short term...But what value is a 25 percent increase in the quarterly dividend to a company that is out of

business five years from now?"⁵² Deming thinks that mobility of American labor is almost as bad, and attributes the problem largely to the mobility of management.⁵³

It seems clear that an organization operated on TQM principles places a premium on the stability of both management and labor. This strongly suggests two related, but separate cultural expectations. First, both managers and employees should expect to remain in their jobs for extended periods. Deming is clear that constancy of purpose can only be created by managers "with roots."⁵⁴ Dr. Henry Neave, a close colleague of Dr. Deming explains, "It takes time to become a real part of any organization, to become familiar with its business, its problems, its people, its customers."⁵⁵ Management and labor are committed to long-term change in TQM organizations. This commitment is demonstrated by policies and behavior that reinforce and reward stability and discourage job-hopping.⁵⁶

Second, upward mobility is slow by American standards. A reality of management and labor stability, rapid promotion is neither expected nor desirable in a TQM organization. In fact, "(a) theory designed to give the potential manager upward mobility is not one that can help anyone cultivate company loyalty and success over the long haul," according to Dr. Nancy Mann, a Deming endorsed interpreter of TQM philosophy.⁵⁷ As will be discussed later, promotion is not a part of TQM cooperative reward systems based on group success.⁵⁸

WAYS AND MEANS DICTATE ENDS

Processes (ways) and inputs (means) are the keys to

improvement. Deming estimates some 94 percent of the faults resulting in production or service problems are input or process deficiencies. These "common causes" are recurrent until identified and rectified by management. They clearly offer significant potential for improvement.⁵⁹ The expectation of leaders operating on TQM principles is that the source of virtually any problem lies within the system and can be identified.

This organizational assumption leads to emphasis on detecting and reducing variation both of input to the system at every stage and in the processes that transform inputs into a product or service.⁶⁰ Gaining statistical control of inputs (things or information) and processes (a combination of people, material, equipment, method, and environment) is essential.⁶¹ Variation of inputs or processes is detected and eliminated at each stage, permitting quality to be built into the product, rather than requiring defects to be detected by inspection after the fact.⁶² Deming suggests that "routine...inspection (of products) to improve quality is equivalent to planning for defects, acknowledgement that the process has not the capability required for the specifications."⁶³

It follows that measuring output will not improve quality. Deming is vehement in condemning organizational objectives stated as measures of outcome. He specifically identifies for elimination: MBO for organizations and individuals, work standards or numerical quotas for workers, and targets for either zero defects or increased output.⁶⁴

The implied cultural attitude is that "how" the job gets done is the dominant factor in the quality of what is accomplished. An accompanying assumption is that identification of outputs as performance standards or objectives works to the detriment of commitment to quality. That is, if the goal is to achieve the objective, quota, or other numerical outcome, then quality is no longer the individual and corporate focus. When applied to individuals, quotas or quantified objectives deprive the workers of pride in their work.⁶⁵ The TQM institutional belief is that the sole sustainable objective is continual improvement of processes to achieve quality.⁶⁶

PEOPLE ARE NOT THE PROBLEM

As discussed, above, Deming is quite adamant in asserting that variation within systems are the "common causes" for the overwhelming majority of problems with products and services. He explains that these system faults handicap workers and are the responsibility of management.⁶⁷ TQM assumes that people generally do the best that they can. However, Mary Walton quotes Deming asserting: "Doing your best won't do it. We should be thankful that not everybody's doing his best. You have to know what to do, then do your best."⁶⁸ Deming further suggests, "A basic principle presumed here is that no one should be blamed or penalized for performance that he cannot govern."⁶⁹

Certainly people are part of most systems and can contribute to dysfunctional variation of processes. However, as noted in one management study, "People become victims or beneficiaries of normal variations built into the system."⁷⁰ Deming declares

that management has the responsibility to "understand and act on the problems that rob the production worker of the possibility of carrying out his work with satisfaction."⁷¹

Thus, an organization operating on TQM principles "starts with the premise that people are inherently good (and) that they want to take pride in their work."⁷² Moreover, it is expected that if given the opportunity, both managers and workers will continuously examine inputs and processes to identify and reduce variation.⁷³

MANAGEMENT IS RESPONSIBLE FOR PERFORMANCE

"The aim of leadership should be to improve the performance of man and machine, to improve quality, to increase output, and simultaneously, to bring pride of workmanship to people," according to Deming.⁷⁴ While Deming implicitly accepts that not everyone can be trained to do everything, he clearly believes that everyone can be trained to do something that both contributes to the organization and is rewarding to the individual.⁷⁵ Dr. Neave quotes Deming as asking rhetorically of management, "If a worker cannot learn his job, why did you put him there?"⁷⁶

If leadership is responsible to teach workers both what their job entails and how to do it, then, Deming says, "Leaders must know how to do the work that they supervise."⁷⁷ A TQM culture assumes that leaders know how to do the jobs of the workers for whom they are responsible and believes that leaders have an obligation to transfer this knowledge to each worker. Additionally, workers expect their leaders to care enough about

them (and the organization) to ensure that they are properly trained.

Deming believes that everyone has a need, even an obligation to seek self-improvement. While this is an individual responsibility, the organization should be supportive of employee self-improvement, as in the long-term interest of the organization. This is true even if not directly related to present responsibilities.⁷⁸ The implicit cultural attitude is that knowledge is power, and more knowledgeable employees result in a more powerful organization able to deliver higher quality products or services.

TEAMWORK IS KEY TO QUALITY

Suboptimization within functional areas is the key to failure.⁷⁹ Deming's TQM philosophy is expressed as "management by positive cooperation" or even more concisely, "cooperation: win-win."⁸⁰ "Everybody wins on better quality; everybody loses on poor quality."⁸¹ Leadership is responsible for breaking down barriers to cooperation and for fostering teamwork, as well as encouraging continued development of workers.⁸²

The most significant barrier to teamwork is performance rating systems.⁸³ As Deming explained to a management seminar, "Is it management's job to help staff areas work together? To promote teamwork? Sounds great, but can't be done under the present system (of ratings). When it comes to a showdown under the present system and someone has to make a decision--his own rating or the company's--he will decide for himself."⁸⁴

Within a TQM organization there is a fundamental belief that

periodic rating of individuals works to the detriment of both the individual and the organization. A Deming endorsed explanation is that a rating system "destroys teamwork, fosters mediocrity, increases variability, and focuses on the short-term."⁸⁵ The underlying assumption is that rating systems focus on short-term outcomes based on quotas or objectives, as previously discussed, and tend to limit, rather than enhance, individual contributions. Deming estimates, "Only two out of 100 managers take joy in their work. Most of the 98 have their eye on a good rating, not daring to contribute innovation to their work."⁸⁶

Association of compensation or rewards (including promotion) with individual performance or ratings of performance "wrecks teamwork and nurtures rivalry," according to Deming.⁸⁷ Dr. Neave suggests that, "Monetary reward is a way out for managers that do not understand how to manage intrinsic motivation."⁸⁸ If promotion is viewed as a reward, then it is natural to focus on whatever it takes to get a good rating, not on what is best for the organization.⁸⁹ In TQM organizations, rewards, if any, should be based on the accomplishments of teams, with individual contributions recognized by team consensus.⁹⁰ Promotion criteria is less defined. One Deming protege suggests that promotion selection be based on personal knowledge of candidates.⁹¹ What is clear is that within a TQM organization there can be no expectation that individual performance will be rewarded unless it contributes to team and corporate success.

FEAR IS THE ENEMY OF QUALITY

"No one can put in his best performance unless he feels

secure," according to Deming.⁹² Further, "the economic loss from fear is appalling...fear takes a horrible toll. Fear is all around, robbing people of their pride, hurting them, robbing them of a chance to contribute to the company. It is unbelievable what happens when you unloose fear."⁹³

Fear is a product of MBO, numerical quotas, quantified work standards, and other focuses on output. Deming suggests, "Management by fear would be a better name...the effect is devastating: it nourishes short-term performance, annihilates long-term planning, builds fear, demolishes teamwork, nourishes rivalry and politics."⁹⁴

"The annual review (ie, rating) of people is a major culprit generating fear and wreaking havoc in our corporations and on our people. People emerge from their reviews shaken and destroyed, unable to function properly for months. The review artificially creates winners and losers. If you find yourself in the top half or top quarter or top tenth, you're a winner. Everyone else is a loser."⁹⁵

The TQM cultural assumption is that management must eliminate practices that cause fear. Deming puts it succinctly, "Drive out fear, so that everyone may work effectively."⁹⁶ Moreover, there must be a fundamental belief that workers have nothing to fear from the continual effort to improve quality. Walton quotes Deming as being emphatic that organizations "must make it clear that no one will lose his job because of improvement in productivity."⁹⁷ "Fear...will disappear as management improves, and as employees develop confidence in management."⁹⁸

TQM CULTURAL SUMMARY

Elements of TQM organizational culture have been postulated, above, based on TQM principles. The assumptions, attitudes, beliefs, and expectations--the culture--attributed to TQM organizations by the preceding analysis are summarized as follows:

- Customer (ie, external) values supersede those of management. A basic function of management is to align the organization with the customer definition of quality.

- Managers are the source of organizational constancy and stability and need roots within their organizations.

- Managers (and workers) expect to remain in their jobs for extended periods.

- Promotion, slow by American standards, is essentially outside of the reward system.

- How a job is done determines the quality of the outcome.

- Managers identify and resolve common system problems to permit people to work through systems to produce quality.

- Setting quantifiable objectives, quotas, or standards for outcomes is counterproductive.

- People are inherently good and want to do the right thing. Individuals will contribute to continual improvement if given the opportunity.

- Leaders know how to do the jobs of their workers and are responsible for developing and sustaining worker job knowledge and ability.

- Individual self-improvement through education is in the long-term interest of the organization.

- Team work is essential to quality.
- Rewards are based on teamwork and the contributions of teams.
- Periodic rating of individual performance is dysfunctional for both individuals and organizations.
- Successful managers will eliminate practices that produce fear within the workplace, ie, MBO, numerical quotas, work standards, and periodic performance ratings.
- Employees need not fear loss of their jobs.

ARMY CULTURE

Significant assumptions, attitudes, beliefs, and expectations common to soldiers--Army cultural traits--can be identified by observing and examining prescribed and, where different, actual behaviors and leadership practices. The following assessment of Army culture intentionally focuses on areas identified by the preceding analysis of TQM.

THE BOSS IS THE CUSTOMER

Determining who the Army's customer(s) might be is at best problematic. One critic suggests that the Army, as a government agency, has too many customers with divergent and mutually exclusive demands for the TQM concept of "customer" to be useful.⁹⁹ Nonetheless, a case might be made that the American public (or their elected representatives) are the users of the Army's capability to deter war or terminate hostilities on favorable terms if deterrence fails. On closer examination, the public and Congress seem more akin to Army stockholders and a board of directors, respectively, than to customers.

The Department of Defense Reorganization Act of 1986 (more commonly known as Goldwater-Nichols) clearly makes the combatant commanders of the unified and specified commands the users of Army forces. Technically the provider of forces for combatant commanders' operation, the Army's normal (ie, peacetime) state has been characterized by infrequent contact with and limited influence by combatant commanders, although this is changing. In fact, when there is a direct association between a commander of a joint command and an Army component, the relationship is more one of leader-subordinate than of customer-supplier.

This suggests a different approach to the question of who is an Army customer. Examining where Army leaders actually look for determination of quality, leads to the strong suggestion that in this sense the customer is "the boss." This is true at each echelon and accounts for both peace and war. A unit is successful when the boss, usually the commander of the next higher echelon, is satisfied or even delighted (to use TQM criteria)¹⁰⁰ with the product or service.

As an example, consider the relationship of division artillery (DIVARTY) to the maneuver units of a division. The brigade or task force commander with priority of fires may be delighted by the quality (and quantity) of service provided by the DIVARTY, while the unit commander conducting an economy of force operation is desperately dissatisfied with the service provided by the same organization. The DIVARTY success is judged not by the units competing for its services, but by the division commander--the boss.

This concept is neither new nor unique to the Army. As noted by an acknowledged expert in organizational theory, "The implication of the hierarchical structure is that the most important customer of anything which goes on is the immediate superior of the individual or group concerned."¹⁰¹ Within the Army, professional development, promotion, and retention systems strongly reinforce the idea of boss as customer, as will be discussed below.

This leads directly to a fundamental cultural belief that in the absence of persuasive evidence to the contrary, (and sometimes even with such evidence), the boss is the ultimate adjudicator of quality or value. Certainly there are significant organizational safeguards intended to preclude arbitrary or capricious action by Army bosses. Their very existence is further evidence that Army leaders, subject to their bosses--the Secretaries of the Army and Defense and the President as Commander in Chief--are the principal judges of quality within an essentially closed system.

As a highly structured, extensively codified organization, the Army has documented core qualities essential both to members and to actions of the organization. These are expressed as an institutional ethic and individual values that doctrinally "serve as solid guides for Army managers at all levels on how to behave and make decisions."¹⁰² These enduring individual and institutional values are taught to new members of the Army. Soldiers, especially leaders, internalize these attitudes. At the most basic level there is a cultural expectation of duty,

integrity, loyalty, and selfless service. The core individual values of commitment, competence, candor, and courage are instilled as attitudes essential to each soldier.¹⁰³

UNITS ARE INHERENTLY STABLE

There is substantial military tradition that the unit endures, symbolized by its colors, while commanders come and go. This is rooted in the grim reality that anyone on the battlefield, including leaders, is subject to instantaneous incapacitation. While technically true for anyone in any field, (heart attacks, strokes, and accidents put all at unexpected risk), military units in general, and Army units in particular, organize and operate with the likelihood of sudden, unplanned leadership changes in view.

This tradition and the reality on which it is based result in the institutional belief that no one is irreplaceable, and the corporate expectation that everyone can and will be replaced. These cultural attitudes are reinforced by Army professional development and personnel management policies. For example, centrally managed permanent change of station (PCS) moves to and from professional development schools require 17-25 percent of Army captains, majors, and lieutenant colonels to change jobs and organizations each year.¹⁰⁴ When one combines professional development PCS moves with those required to rotate the force between overseas and continental United States assignments, at least 30 percent of Army officer and noncommissioned leadership moves each year.

Army unit leadership tenure is limited by policy. Company

commanders typically serve 12 to 24 months, dependent on branch and organizational circumstance. Battalion, brigade, and division command tours are fixed at 24 months.¹⁰⁵ Similarly the federal government in general, and the Department of Defense specifically, typically operate on a four year cycle coinciding with the election of the President, followed by the appointment of the executive leadership of each department. There are of course examples of more rapid turnover of both political and military leaders. "What is surprising is that government executives spend any time at all on managing their departments," according to one analyst of leadership stability.¹⁰⁶

The Army compensates both for the reality of planned leadership change and for the likelihood of unexpected leadership incapacity requiring change, by formally standardizing and rationalizing institutional values, as previously discussed; organizational structures; and broad policies and procedures. The result is a cultural assumption that the essential mission, structure, and basic procedures are part of the unit itself, existing independent of leadership changes.

For example, change of command in a division does not result in change to the DIVARTY's basic mission of fire support for the division, to the prescribed table of organization and equipment, or even to the procedures for a fire mission. These are standard throughout the Army. Even the procedures for changing missions, structures, and procedures are codified.

A healthy tension exists between the previously explained cultural belief that the boss determines the quality of the

product or service provided by a subordinate Army unit, and the equal reality that there are important limits placed on a boss's power to modify that organization's purpose, structure, and procedures. Balance between institutional inertia and the arbitrary, capricious acts of unlimited power is essential. The intent is standard, stable organizations of predictable capability, able to function despite either planned or traumatically unexpected changes of leadership.

SOLDIERS ARE THE SOLUTION

Quality soldiers, competent leaders, and challenging training constitute three of the six imperatives identified by the Secretary of the Army and the Army Chief of Staff as, "...key to the Army's future success."¹⁰⁷ They additionally believe that "quality soldiers are key to any successful army...and the cornerstone of a trained and ready Army."¹⁰⁸ Army units typically have little ability to control the quality of weapons, supplies, or even soldiers provided. Notwithstanding, they are expected to accomplish assigned missions. The bottom line is that modern weapons, innovative doctrine, and organizational structures are the tools of soldiers, but as President Kennedy said in his 1963 State of the Union Message, "Arms are not enough to keep the peace. It must be kept by men."¹⁰⁹

The prevailing belief of soldiers, including leaders, is that they are the solution to virtually any problem. As a result, soldiers are not infrequently confronted with difficult, seemingly insurmountable challenges. Army leaders attempt to match soldier capabilities to missions. However, the fact remains

that soldiers may be asked to do things both beyond reasonable expectation of success and "against their natural will."¹¹⁰ The strong cultural assumption is that the soldier "can do" anything, or will die trying.

DESIRED OUTCOMES DETERMINE WAYS AND MEANS

The Army is outcome oriented. The Army's keystone manual for its warfighting doctrine identifies the first Principle of War as the principle of Objective: "Direct every military operation towards a clearly defined, decisive, and attainable objective."¹¹¹ The basic Army document describing Army roles and missions tells us that "Doctrinal tenets and imperatives are derived by the application of these principles (of war) to our era, thus producing a uniquely American way of war."¹¹²

Therefore, it is not surprising to find objective (or outcome) oriented policies and procedures within the Army. For example, the Army's training doctrine outlines procedures for developing organizational training objectives based on wartime Mission Essential Tasks articulated as outcomes. Training success is evaluated by measuring the ability of individuals and units to achieve the standards (measures) specified by the training objectives.¹¹³

Similarly, the Army Officer Evaluation Reporting System (OERS) and Noncommissioned Officer Evaluation Reporting System (NCOERS) are outcome oriented. A reporting cycle begins with identification of performance objectives and personal professional development needs of the individual. It ends with a written evaluation of performance relative to the objectives and

professional standards, and an assessment of demonstrated potential for positions of increased responsibility based on the performance.¹¹⁴ There is a close linkage between unit objectives (e.g., training objectives previously discussed) and Army professional development goals for officers and noncommissioned officers, and the performance objectives established as part of the rating system.

These are classic MBO approaches that determine desired outcomes (e.g., Mission Essential Tasks), establish measurable objectives leading to the outcomes, and evaluate performance in relationship to objective accomplishment.¹¹⁵ Organizational goals are reflected in performance objectives established for individuals and against which they are evaluated by the OERS and NCOERS.

The resulting cultural assumption is that the objective, or what must be done, generally determines the resources (or means) to be committed and the way they will be used. The Army's basic warfighting doctrine summarizes this concept by explaining that the political objective (ends) of a war determine the degree of military force (means plus ways) to be used.¹¹⁶ The same doctrine encourages "mission orders that specify what must be done without prescribing how it must be done."¹¹⁷ This traditional focus on achieving the objective by all means necessary is balanced by the equal responsibility to do so lawfully and ethically, as implied by enlistment and commissioning oaths.

LEADERS ARE RESPONSIBLE FOR SOLDIERS

"The most essential element of combat power is competent and confident leadership. Leadership provides purpose, direction, and motivation," according to Army doctrine.¹¹⁸ The leader determines how objective(s) assigned to or developed by an organization will be accomplished. "Leaders...must take care of soldiers' needs; develop them into cohesive teams; train them under tough, realistic conditions to demanding standards; assess their performance; assist them with their personal and professional growth; and reward them for their successes," according to General Vuono writing as Army Chief of Staff.¹¹⁹

Although basic and initial skill training is accomplished by Army training institutions, leaders at each level are responsible for job and organization specific training.¹²⁰ Training is the process leaders use to create organizational capability from assigned people and allocated resources.¹²¹ Leaders are expected to be proficient in their jobs, to teach soldiers what is expected of them and how to do it, and to learn the job of the next higher leader.¹²² Also, soldiers are expected to seek self-improvement and leaders have a duty to encourage and support soldier self-development.¹²³

The pervasive cultural assumption is that Army leaders are responsible for the performance of both individual soldiers and their organization. While there are both practical and legal limits to leader accountability, soldiers certainly expect to be prepared to do their job within a unit that is capable of performing its basic mission.¹²⁴ There is a clear

institutional expectation that Army leaders will care for soldiers, prepare them to do their jobs, support self-development, determine the ways and means to accomplish assigned ends, and organize soldier and unit efforts to accomplish the mission.

TEAMWORK IS ESSENTIAL

"Warfighting is a team activity," according to Army leadership doctrine.¹²⁵ A fundamental reality is that soldiers willingly put themselves at risk for the sake of a team and its members. This feeling of cohesion, of selfless obligation to others is the product of mutual respect, trust, and confidence developed through overcoming hardship and accomplishing difficult objectives together.¹²⁶

At the highest levels, the Chairman of the Joint Chiefs of Staff asserts, "Joint warfare is team warfare."¹²⁷ Army doctrine assumes that combat operations will be joint, combined, or both, conducted in most cases by a unified commander.¹²⁸ Within Army organizations, (ie, corps, divisions, brigades, and battalions), combined arms and services operations are the norm.¹²⁹ The concentrated effort of command teams, staff teams, and informal or ad hoc teams is required to plan and execute virtually any military operation.¹³⁰

Soldiers, from the most senior to the most junior, are expected to be team players by superiors, peers, and subordinates. Conversely, soldiers generally assume they will be part of a team and seek recognition by and support of team members. Army leaders build teams that nurture, develop, and

challenge team members. The result is commitment and cohesion that accomplishes far more than the sum of individual efforts.¹³¹

FEAR IS A FACT OF LIFE

Army doctrine asserts that "fear is a natural human emotion caused by anticipation or awareness of danger."¹³² There can be no question that sane soldiers should be expected to experience fear in dangerous situations. Lieutenant General George S. Patton, Jr., suggested, "All men are frightened (by combat). The more intelligent they are, the more they are frightened."¹³³ In this sense, soldiers assume that fear and the need to control their fear are natural and inevitable.

In this context of requiring soldiers to do that which is manifestly not in their narrow self-interest--to knowingly go in harm's way--the need for military discipline becomes clear. Congress provides the Uniform Code of Military Justice as a tool in the maintenance of discipline. It establishes as punishable violations of federal law a number of acts or omissions not recognized as crime by civil codes (e.g., absence without leave, disobedience, disrespect, misbehavior, and malingering.)¹³⁴ While relatively few disciplinary actions deal directly with life or death issues, the Army considers adherence to standards in small things to be the essential building blocks for obedience in the face of death. General Patton summarized this concept in typically direct language, "If you can't get (soldiers) to salute when they should salute and wear the clothes you tell them to wear, how are you going to get them to die for their country?"¹³⁵

Army leadership doctrine asserts that "the fear of punishment greatly affect(s) soldiers' behavior."¹³⁶ The clear intent of punishment is to modify unacceptable behavior rather than induce fear; nonetheless, fear is assumed to be a component of punishment. Army leaders are enjoined to train rather than discipline those unable to comply, but to punish those unwilling or apathetic to proper direction.¹³⁷ However, the very real potential of administrative or legal sanctions contains an element of fear. The cultural expectation is that failure to obey will result in punishment. The certainty of this belief --essentially, fear--is an important element in modifying the behavior of soldiers.¹³⁸

Fear is also an unavoidable element of the officer and noncommissioned officer evaluation systems discussed earlier. The issue is neither the type nor manner of evaluation, but rather, its principal purpose. Both OERS and NCOERS have explicitly stated roles in the identification both of those best qualified for promotion and of those to be eliminated.¹³⁹ The common belief, supported by Army policy statements and reports (official and unofficial) of promotion board proceedings, is that evaluation reports are a dominant factor in deciding who is selected for promotion.¹⁴⁰

The significance of promotion to soldiers cannot be overstated. Promotion is the Army's principal reward system. This assertion neither ignores nor detracts from the formal system of individual and unit awards for valor or service. However, promotion is so tightly linked to pay, prestige, and

retention that it assumes a dominant role in soldier attitudes, beliefs, and expectations. Failure to be selected for promotion, including schools or assignments key to promotion, is the first step towards involuntary separation. Both enlisted and officer management systems require competitive selection for promotion at regular intervals as a condition of tenure.

Thus, evaluations become more than the rating chain's "objective" assessment of performance for a specific period and estimate of potential based on that performance.¹⁴¹ Soldiers generally view each report as the boss's vote concerning a near-term pay raise with increased prestige (ie, selection for promotion) and the long-term prospects for employment. Soldiers take evaluations personally and, often, emotionally. While the evaluation process is relatively private, the results are very public. There is no denying either the peer affirmation attendant to selection for promotion or the stigma associated with being "passed over" for selection.

Most soldiers experience fear--often expressed as apprehension or anxiety--associated with evaluation and selection processes. One survey suggests that the majority (70-80 percent) of both officers and enlisted soldiers do not believe that present evaluation and selection systems are effective in promoting the best soldiers. However, the same survey shows that more than half of the force expects to be promoted in accordance with their ability and interest.¹⁴² At best, a significant number of soldiers do not believe that they are among "the best" and will be promoted anyway. More likely, these moderately

conflicting results reflect soldier ambivalence concerning processes fundamental to their job security. The professionals' assessment is that this data, compared with earlier data, shows some erosion of trust in the promotion (and evaluation) system.¹⁴³

It seems fair to conclude that most soldiers, including the most successful, experience at least mild anxiety about evaluation or promotion at some point in their military career. It is not atypical for a senior (ie, successful) officer to demonstrate extreme anxiety pending the results of a selection board. The fact is that almost all soldiers will eventually "fail" to be selected for something. The cultural attitude is that the fear associated with such "failure" goes with the job.

ARMY CULTURAL SUMMARY

Elements of Army culture--assumptions, attitudes, beliefs, and expectations--roughly corresponding to previously postulated elements of TQM culture, have been identified by the preceding analysis. They are summarized as follow:

- Army leaders determine quality, subject to legal and ethical constraints.

- Soldiers of all ranks are expected to internalize an enduring institutional ethic and core individual values.

- The purpose, structure, and procedures of Army organizations exist independent of leadership changes.

- No unit member, including leaders, is irreplaceable. Organizations expect and plan for both routine and unscheduled leadership changes.

-- Soldiers can and will overcome shortages and handicaps to accomplish the mission.

-- What is to be done, the objective, is the principal focus. Leaders are generally permitted and expected to determine the best way to accomplish assigned objectives.

-- Objective oriented evaluations are appropriate for both individuals and organizations.

-- Leaders are responsible for the professional development of soldiers, including job specific training and self-development.

-- Soldiers expect, and are expected, to be team players.

-- Fear in varying intensity is inherent to combat, punishment, and the Army's highly competitive promotion and retention system.

COMPARING TQM AND ARMY CULTURES

Having first postulated significant TQM cultural elements based on TQM principles and then identified related Army culture, the following comparison will highlight areas of potential consonance and dissonance between TQM and Army cultures. The several and seemingly disparate cultural elements described in the preceding analyses seem to converge on four central issues. To wit:

- determinant of quality or value,
- source of stability and continuity,
- focus of leaders,
- tolerance of fear.

QUALITY

Quality, like beauty, is in the eye of the beholder. A TQM culture looks outside of itself to identify quality. The customer defines quality. A basic responsibility of TQM leadership is to understand and anticipate customer defined quality, constantly and forever adjusting and realigning the organization to meet customer expectation and demand.

Army culture assumes that quality is defined within the organization. Army leaders, guided by institutional ethics and values, determine quality. They do so based on roles and missions assigned by the Congress, acting as a "board of directors" on behalf of the American people, the ultimate owners (vice customers) of the Army.

TQM and Army cultures diverge in this matter. While the TQM concept of customer determined quality might be used to examine relationships between and among organizations of the Army, the concept is flawed when applied to the Army, and possibly, the government at large.¹⁴⁴ The market, where a customer determines quality by choosing between products, is not analogous to the war zone where the Army's product is conclusively tested. The enemy is clearly not the Army's customer, although the enemy's defeat might be seen as the ultimate product endorsement.

STABILITY AND CONTINUITY

A TQM culture looks to its leaders as the source of organizational stability. It expects its leaders to have roots within the organization and, by their very presence, to provide continuity and constancy of purpose. Mobility within the

organization, both lateral and vertical, is constrained to promote organizational stability.

In contrast, soldiers expect their leaders to change both routinely and abruptly. Soldiers of all ranks assume they will relocate and change jobs frequently. They expect to be promoted and to assume new jobs commensurate with their increased rank, and presumably, responsibility and authority. (Indeed, a soldier not selected for promotion at prescribed intervals has begun the process leading to separation.) Army organizations have inherent stability--purpose, structure, and procedures--to compensate for the reality of leadership change.

While TQM and Army cultures appear to differ on the issue of stability, there is some common ground. Certainly Army leaders have significant roots within the larger organization, including cultural expectations of selfless service and commitment. The issue then becomes one of experience with and commitment to a specific unit for the purpose of providing organizational stability and constancy of purpose.

Here the divergence becomes clearer and more significant. The Army builds essential stability into organizations. This results both in a belief that continuity is inherent within units and in the expectation that leaders will change without altering the basic purpose, structure, or procedures of units. The Army expectation is that a leader is permitted rank and position in order to better serve the unit and the nation.¹⁴⁵

LEADERSHIP FOCUS

TQM leaders produce quality by focusing internally on

systems' processes. The overriding cultural belief is that continual detection and permanent, systemic correction of common process faults is the key to continually improving quality. This explicitly includes close control of all inputs to each process. By removing process obstacles, the leader frees workers to achieve quality. Workers expect leaders to teach them to work within process tolerances. Leaders believe it is a principal duty to both train workers in present duties and to encourage self-improvement.

TQM emphasizes teamwork and cooperation within and across organizational structures. TQM leaders focus both on building their team and on working with other teams. The strong cultural assumption is that outcome oriented objectives and evaluation systems destroy the ability of people and organizations to work cooperatively. Closely linked is the TQM belief that rewards must be based on teams and their contribution to quality.

The Army is outcome oriented. MBO is embedded within critical operational and personnel management systems. Leaders assign objectives and measure their accomplishment. At each level, leaders expect to be told what needs to be done, but not how to do it. Central to Army culture is the strongly held belief that soldiers, individually and as units, will overcome system shortcomings to accomplish the mission. Consequently, leader responsibility to train and develop soldiers is both an institutional requirement and a cultural expectation. An Army leader often has little ability to control input (ie, equipment or supplies) or processes (ie, procedures established by higher

echelons.) However, leaders can and do focus their efforts on building the skills, knowledge, and confidence of individual soldiers and teams of soldiers.

Clearly, TQM rejection of outcome oriented management clashes with objective oriented Army leadership. As a result, Army culture embraces a number of practices that are anathema to TQM, e.g., MBO, performance evaluations, and competitive promotion based on merit. Some management experts suggest that the very real differences between government and business justify diverging leadership focus: government emphasizes outputs while business concentrates on inputs.¹⁴⁶

Curiously, the conflicting approaches of TQM and Army leaders notwithstanding, the cultural attitudes concerning leader responsibility for training and development of subordinates are virtual identical. Each affirms the duty of leaders to teach immediate subordinates their specific jobs and general roles within the organization, and to support and encourage self-development. However, Army leaders are expected to develop subordinates for positions of increased responsibility, while TQM is largely silent on the subject of upward mobility.¹⁴⁷

Similarly, teamwork and both intra- and inter-organization cooperation are essential to success of TQM and Army leaders. However, the paths to the common purpose are dissimilar. The TQM approach is to eliminate all potential barriers to cooperation, including many common management tools. The assumption is that people want to cooperate for the common good if only the organization and its leaders will create the proper conditions.

Army leaders believe that they can build teams and foster teamwork by developing common values, shared experiences, competence, and common intent.¹⁴⁸

FEAR

TQM identifies fear as an enemy of quality. A central cultural belief is that whatever causes fear within the workplace must be avoided. A host of management tools are identified for elimination as producing fear: MBO, quantified quotas or goals, performance evaluations, merit promotions, and involuntary separation. Significantly, TQM theorists omit any discussion of discipline or punitive corrective action, explicitly assuming that people are inherently good and want to do the best that they can.¹⁴⁹

The Army accepts fear as inherent to the fundamental purpose of the Army. Moreover, the Army and Congress, representing the people, expect some soldiers to fail, willfully or apathetically, to meet reasonable performance requirements. The assumption is that fear of punishment can modify behavior. Additionally, more moderate fear (ie, apprehension, anxiety, or stress) associated with accountability, evaluation, competition, and personnel management is believed to be necessary and acceptable to accomplish organizational objectives.

TQM and Army cultures are diametrically opposed in attitudes, beliefs, and expectations concerning fear. TQM judges fear to be so damaging that its causes must be driven from the organization. This belief is fundamental to TQM and there appears to be no room to justify a fear inducing practice by the

resulting greater good. The Army culturally accepts fear as a natural response to the reality of possible death or injury in combat. Moreover, while TQM culturally recognizes no need for disciplinary action, Army culture believes that fear is useful and necessary in modifying unacceptable behavior.

The undeniable differences between the Army and any business account for conflicting views on fear produced by combat, and in some cases, punishment. But there remains a basic, unresolved contention concerning management practices that cause fear. Army culture expects members to tolerate such transient mental discomfort. The belief is that the organizational purpose--the outcome--justifies the method.

CONCLUSIONS

This study has summarized the tenets of Deming based TQM; postulated the common assumptions, attitudes, beliefs, and expectations--cultural traits--likely to characterize an organization committed to these TQM principles; identified extant Army cultural attributes in areas generally corresponding to the postulated TQM cultural traits; and compared significant aspects of likely TQM culture with existing Army culture.

The comparison of TQM and Army cultures articulated above, strongly suggests that significant consequences for both culture and management practices are readily apparent. Some of these likely effects reinforce aspects of Army culture. Others portend elimination or, more likely, replacement of present cultural norms with different assumptions, attitudes, beliefs, and

expectations. In the latter case, modification of related management systems would either precede or result from cultural change.

MUTUALLY REINFORCING

The TQM assumption that leaders must train subordinates and encourage self-improvement is consistent with Army expectations for leaders to train and develop soldiers and to support self-development. Competence is valued by each culture. Similarly, TQM attitudes towards constancy and leader allegiance to the organization coincide with Army values of duty, loyalty, selfless service, and commitment.

The TQM imperative to eliminate fear within the organization supports outcomes (e.g., candor) valued by Army culture. Banishment of fear combines with TQM interest in breaking down barriers for the express purpose of fostering cooperation within and among work groups. Army leaders believe that development of teams is essential to success and most soldiers expect and seek team membership.

This common emphasis of and commitment to teamwork is probably the strongest link between TQM and Army cultures. The methods prescribed by TQM and practiced by the Army are substantially different. But the intent of both TQM philosophy and Army leadership doctrine is to enhance organizational capability beyond the formal structure. From separate, distinct theoretical rationales, each culture believes that dramatically improved results can be achieved--and only achieved--through teamwork.

MUTUALLY EXCLUSIVE

Significant aspects of TQM and Army cultures are in conflict. The concept of customer defined quality is central to TQM. In contrast, the Army looks to the leader of the next higher echelon for affirmation of quality. The ultimate quality of the Army is determined by its usefulness to the President, the Commander in Chief, in deterring war, or if deterrence fails, achieving a favorable outcome in combat.

This points to possibly the most significant conflict between TQM and Army cultures. At each echelon the Army orients on clear, measurable, and achievable objectives. MBO is embedded within key management systems. There is an overriding institutional belief that soldiers will overcome tremendous obstacles to accomplish assigned missions. This is the direct antithesis of the TQM emphasis on process as key to quality output and TQM belief that leaders must remove system barriers so that workers can achieve quality. There is little apparent expectation that workers can or will act to correct process faults without leader intervention.

As a subset of the Army's outcome oriented attitude, performance based evaluation and promotion are central to Army personnel management. Soldiers expect to be given clear objectives, evaluated both on their ability to achieve individual objectives and on their contribution to team success, and competitively promoted (or separated) based primarily on the evaluation. TQM culture categorically rejects outcome based evaluation and competitive promotion as dysfunctional. Both results and underlying assumptions appear irreconcilable.

TQM and Army cultures diverge on another important issue. TQM assumes that management stability is required for constancy of purpose within organizations. Therefore, leaders and workers expect to remain in their positions for extended periods. The Army builds stability into units to compensate for combat realities that preclude presumption of leader stability. Soldiers of all ranks expect leaders to change without altering the primary purpose, direction, or functions of the unit.

Army and TQM attitudes about fear differ radically. Fear is inherent to unavoidable aspects of the Army, ie, combat and military discipline. Less intense--but nonetheless real--fear attendant to competitive evaluation and selection systems is tolerated by both the institution and individuals because of the compensating outcomes. A basic TQM belief is that there is no justification for management practices that cause fear. Both leaders and workers within a TQM culture expect that all causes of fear can and must be eliminated. Hence, TQM and Army attitudes concerning fear diverge because the base assumptions are in elemental opposition.

BOTTOM LINE

TQM and Army cultures are absolutely incompatible in crucial core aspects. The substantive nature of these differences appear to overshadow instances of convergence. This should not be surprising since TQM theorists explicitly advocate transformation and revolution, not revision. This implies significant variance between what is proposed and what exists. Said plainly, implementation of TAQ, as Deming prescribed TQM, will require the

Army to change the way it thinks about war, training, discipline, leader development and selection, structure of units, management of soldiers, and a multitude of similarly significant issues.

Army leadership requires implementation of TAQ philosophy tailored by leaders of each organization to fit unique circumstances. This leads to interesting questions:

-- Can TAQ be objective oriented? Can MBO be tolerated within TAQ?

-- Can TAQ be effective in the absence of an external customer to define quality?

-- Can TAQ invest stability within units, permitting organizations to survive the loss of leaders?

-- Can TAQ tolerate fear either inherent to the unit's purpose or balanced by a desirable organizational outcome?

-- Said another way, how much adjustment to TQM principles is possible before TAQ is no longer the "total" approach to management envisioned by Deming?

These questions are not answered by this study. They form the basis for further study. However, the issues they raise restate the fundamental divergence between TQM and Army culture, leading to one of two conclusions. Either the warfighting Army will literally reinvent itself with new attitudes, assumptions, beliefs, and expectations; or, the Army must invent a series of TQM hybrids that will bear little resemblance to the "original."

Finally, it seems evident from the preceding discussion and conclusions that Army policy and guidance is inadequate for TAQ implementation. The Army risks false starts, unwise investment

of time and money, and squandered energy and enthusiasm in the absence of specific direction and sustained leadership from the very top echelons of the Army.¹⁵⁰ The present period of international uncertainty and fiscal constraint requires unambiguous guidance in order to make full use of allocated resources for defense of the nation.

RECOMMENDATION

This study's stated purpose included no intent to make recommendations; however, one emerges of its own weight. The Department of the Army should move quickly to define TAQ in operational terms. To wit: develop, coordinate and publish specific sets of principles (or guidance) tailored to the several informal Army communities (e.g., warfighting, acquisition, and business activities,) in sufficient detail for implementation.

ENDNOTES

¹ Department of Defense, Total Quality Management Master Plan (Washington: U.S. Department of Defense, August 1988), 1.

² W. Edwards Deming, Out of the Crisis (Cambridge, MA: Massachusetts Institute of Technology, Center for Advanced Engineering Study, 1982), ix-xi.

³ Joseph M. Juran, Juran on Leadership for Quality (New York: The Free Press, Macmillan, Inc., 1989), 351.

⁴ Roy R. Willis, "Total Army Quality and the TDA Army," Total Army Quality Newsletter 1, no. 1 (August 1992): 2.

⁵ Michael P. W. Stone and Gordon R. Sullivan, Strategic Force, Strategic Vision for the 1990s and Beyond: A Statement on the Posture of the United States Army, Fiscal Year 1993, Posture Statement presented to the 102d Cong., 2d sess. (Washington: U.S. Department of the Army, 1992), 72.

⁶ Department of the Army, Army Management Philosophy, Army Regulation 5-1 (Washington: U.S. Department of the Army, 12 June 1992), 3.

⁷ Stone and Sullivan, 72.

⁸ Carol Sanford, "A Self-Organizing View of Paradigms," in New Traditions in Business, ed. John Renesch (San Francisco: Berrett-Koehler Publishers, 1992), 202.

⁹ John W. Thompson, "Corporate Leadership in the 21st Century," in New Traditions in Business, ed. John Renesch (San Francisco: Berrett-Koehler Publishers, 1992), 212.

¹⁰ Sanford, 202.

¹¹ General Accounting Office, Organizational Culture, report to the Chairman, Committee on Governmental Affairs, U.S. Senate, by Donna M. Heivilin (Washington: U.S. Government Accounting Office, February 1992), 1.

¹² DOD TQM Master Plan, 3-4.

¹³ AR 5-1, 3.

¹⁴ Stone and Sullivan, iii.

¹⁵ Ibid., 1.

¹⁶ Department of the Army, Army Focus 1992, (Washington: U.S. Department of the Army, September 1992), 17.

¹⁷ Stone and Sullivan, 72.

18 John D. Richards, "The Role of Leadership in TQM," Military Review 72, no. 8 (August 1992): 84, and Marshall Sashkin and Kenneth J. Kiser, Total Quality Management (Seabrook, MD: Ducochon Press, 1992), 11-23 and 35.

19 DOD TQM Master Plan, 1.

20 James E. Swiss, "Adapting Total Quality Management (TQM) to Government," Public Administration Review 52, no. 4 (July/August 1992), 357. Swiss notes that Deming both incorporates and cites the principles of other quality theorists: Armand Feigenbaum, Kaoru Ishikawa, Joseph Juran, Walter Shewhart, and Genichi Taguchi. Phillip Crosby is the exception. Swiss suggests that Crosby's specification-based, zero-defects approach may be the least adaptable to government.

21 A partial list of those who have published books on Deming and his management theory includes: Rafael Aguayo, Andrea Gabor, Nancy R. Mann, Henry R. Neave, William W. Scherkenbach, and Mary Walton. See Bibliography.

22 Edgar H. Schein, Organizational Culture and Leadership (San Francisco: Jossey-Bass Publishers, 1985), 136.

23 Warren Bennis, "Leaders and Visions: Orchestrating the Corporate Culture," in Corporate Culture and Change, Conference Board Report No. 888, ed. Melissa A. Berman (New York: The Conference Board, 1986): 64, and Schein, 1-7 and 312-313.

24 AR 5-1, 3.

25 This definition borrows both from the GAO definition and from Schein's discussion defining culture. See GAO, 1, and Schein, 5-9.

26 Schein, 112-136.

27 Deming, 23.

28 Ibid., 23-24.

29 Ibid., 97-98.

30 Swiss, 361.

31 See notes 20 and 21, above. Additionally, see Edward M. Baker and H.L.M. Artinian, "The Deming Philosophy of Continuing Improvement in a Service Organization," Quality Progress 18, no. 6, June 1985; Stephen R. Covey, Principle-Centered Leadership, Fireside Edition, (New York: Simon & Schuster Inc., 1992), Chapters 25, 26, and 27; and Sashkin and Kiser, especially Chapters 1-5 and Appendix A.

32 Deming, 26-28, and Sashkin and Kiser, 15-17.

33 Deming, 24-26, and Mary Walton, The Deming Management Method (New York: Perigee Books, The Putnam Publishing Group, 1986), 55-57.

34 Deming, 24-25, and William W. Scherkenbach, The Deming Route to Quality and Productivity (Washington: CEEPress Books, 1988), 11-14.

35 Deming, 27-28, and Rafael Aguayo, Dr. Deming: The American Who Taught the Japanese About Quality, Fireside Edition (New York: Simon & Schuster Inc., 1991), 19-20.

36 Deming, 5 and 141; Scherkenbach, 9-11; and Walton, 58-59.

37 Deming, 28-31 and 77-85, and Swiss, 357.

38 Deming, 309-324, and G. Rex Bryce, "Quality Management Theories and Their Applications," Quality 30 (January 1991): 15-18.

39 Deming, 31-40, and Henry R. Neave, The Deming Dimension (Knoxville, TN: SPC Press, Inc., 1990), 307-318.

40 Deming, 55-59 and 314-315, and Nancy R. Mann, The Keys to Excellence, Third Edition (Los Angeles: Prestwick Books, 1989), 71-72 and 89.

41 Deming, 371-387, and Saskin and Kiser, 49-58.

42 Deming, 28-31 and 70-76, and Scherkenbach, 25-34.

43 Deming, 101-120, and Andrea Gabor, The Man Who Discovered Quality (New York: Random House, Inc., 1990), 18-19 and 26-27.

44 Deming, 52-54 and 86, and Walton, 68-69.

45 Deming, 86-92, and Saskin and Kiser, 31-32 and 83-84.

46 Deming, 59-65, and Walton, 72-73 and 84.

47 National Security Agency, "Quality: A New Understanding," Managing Total Quality, Third Edition (Fort Meade, MD: National Security Agency, 1988), 1.

48 Deming, 141.

49 Ibid., 5.

50 Ibid., 24-25.

51 Ibid., 120.

52 Walton, 55.

- 53 Deming, 121.
- 54 Ibid., 120.
- 55 Neave, 51.
- 56 Walton, 36 and 92.
- 57 Mann, 150.
- 58 Aguayo, 193-198.
- 59 Deming, 315.
- 60 Scherkenbach, 28-34.
- 61 Mann, 67-72.
- 62 Walton, 60-61.
- 63 Deming, 28.
- 64 Ibid., 24.
- 65 Aguayo, 189-190.
- 66 Swiss, 357.
- 67 Deming, 314-315.
- 68 Walton, 32.
- 69 Deming, 251.
- 70 Peter R. Scholtes and Hero Hacquebord, "Beginning the Quality Transformation," Quality Progress 21 (July 1988): 29.
- 71 Deming, 52.
- 72 Scherkenbach, 48.
- 73 Swiss, 358.
- 74 Deming, 248.
- 75 Ibid., 249-251.
- 76 Neave, 328.
- 77 Deming, 54.
- 78 Ibid., 86.
- 79 Ibid., 62-65.

- 80 Neave, 29.
- 81 Ibid., 213.
- 82 Aguayo, 96.
- 83 Deming, 107.
- 84 Walton, 75.
- 85 Scherkenbach, 48.
- 86 Neave, 215.
- 87 Walton, 195.
- 88 Neave, 272.
- 89 Deming, 108-109.
- 90 Scherkenbach, 69.
- 91 Neave, 388.
- 92 Deming, 59.
- 93 Walton, 72-73.
- 94 Deming, 102.
- 95 Aguayo, 190.
- 96 Deming, 23.
- 97 Walton, 84.
- 98 Ibid., 73.
- 99 Swiss, 258.
- 100 Scholtes and Hacquebord, 28.
- 101 Neave, 134.
- 102 AR 5-1, 3.
- 103 Department of the Army, The Army, Field Manual 100-1 (Washington: U.S. Department of the Army, December 1991), 16-17.
- 104 Department of the Army, Officer Assignment Policies, Details, and Transfers, Army Regulation 614-100 (Washington: U.S. Department of the Army, 17 October 1990), 9.

105 Department of the Army, Commissioned Officer Professional Development and Utilization, Department of the Army Pamphlet 600-3 (Washington: U.S. Department of the Army, 29 August 1989), 10, and Charles S. Rousek, ed., Army Command, Leadership, and Management, (Carlisle Barracks: U.S. Army War College, 1992), 19-23.

106 James Q. Wilson, Bureaucracy (New York: Basic Books, 1989), 217.

107 Stone and Sullivan, 15.

108 Ibid., 53.

109 Robert A. Fitton, ed., Leadership (San Francisco: Westview Press, 1990), 267.

110 Department of the Army, Military Leadership, Field Manual 22-100 (Washington: U.S. Department of the Army, July 1990), 1.

111 Department of the Army, Operations, Field Manual 100-5 (Washington: U.S. Department of the Army, May 1986), 173.

112 FM 100-1.

113 Department of the Army, Training the Force, Field Manual 25-100 (Washington: U.S. Department of the Army, November 1988), 2-6, 4-2, and 5-1.

114 Department of the Army, Officer Evaluation and Reporting System, Army Regulation 623-105 (Washington: U.S. Department of the Army, 30 April 1992), 18-20, and Department of the Army, Noncommissioned Officer Evaluation and Reporting System, Army Regulation 623-205 (Washington: U.S. Department of the Army, 30 April 1992), 9-10 and 22-27.

115 Rousek, 2-9.

116 FM 100-5, 173.

117 Ibid., 21.

118 Ibid., 13.

119 FM 22-100, iii.

120 FM 25-100, 1-9.

121 Ibid., 1-1.

122 FM 22-100, 6.

123 Ibid., vii.

124 Timothy W. Elig and Kenneth A. Martell, 1990 Army Career Satisfaction Survey (Alexandria, VA: U.S. Army Research Institute, October 1990), 3.

125 FM 22-100, 7.

126 Ibid., 24-25.

127 Colin L. Powell, "Message from the Chairman," in Joint Warfare of the U.S. Armed Forces, Joint Chiefs of Staff Publication 1 (Washington: National Defense University Press, 11 November 1991), i.

128 FM 100-5, 161.

129 FM 25-100, 1-3.

130 Department of the Army, Leadership and Command at Senior Levels, Field Manual 22-103 (Washington: U.S. Department of the Army, June 1987), 60-61.

131 Ibid., 66.

132 FM 22-100, 40.

133 Leadership, 111.

134 The Judge Advocate General's School, Criminal Law Text (Charlottesville, VA: The Judge Advocate General's School, 1989), 1-5.

135 Leadership, 83.

136 FM 22-100, 50.

137 Ibid., 51.

138 Ibid., 51.

139 AR 632-105, 5, and AR 623-205, 3.

140 DA Pamphlet 600-3, 16; Colonel John A. Whigham, "Lieutenant Colonel Promotion Board," memorandum for the Commanding General, U.S. Army Signal Center and School, Fort Gordon, GA, 6 April 1987; and Major General John M. Shalikashvili, "Selection Board Members Agree: The New NCO-ER is a Winner," memorandum for record, Fort Benjamin Harrison, 1989.

141 AR 623-105, 18.

142 Timothy W. Elig, 1991/1992 Surveys of Total Army Military Personnel (Alexandria, VA: U.S. Army Research Institute, September 1992), CE30-CE32.

143 Ibid., ACST2.

144 Swiss, 258-259.

145 FM 22-100, 30.

146 James Swiss makes a case for a "reformed" TQM for government organizations that reduces focus on immediate external customers, embraces output-oriented objectives and measurement, and emphasizes employee empowerment and continuous improvement. See Swiss, 359-361.

147 Neave, 387-388.

148 FM 22-103, 60-66.

149 Scherkenbach, 48.

150 Dr. Deming warns against false starts and "installing" TQM without sustained leadership by top management. See Deming, 135-139.

BIBLIOGRAPHY

- Aguayo, Rafael. Dr. Deming: The American Who Taught the Japanese About Quality, Fireside Edition. New York: Simon & Schuster Inc., 1991.
- Baker, Edward A., and H.L.M. Artinian. "The Deming Philosophy of Continuing Improvement in a Service Organization." Quality Progress 18, no. 6 (June 1985): 27-38.
- Bennis, Warren. "Leaders and Visions: Orchestrating the Corporate Culture," in Corporate Culture and Change. Conference Board No. 888, ed. Melissa A. Berman, 63-65. New York: The Conference Board, 1986.
- Bryce, G. Rex. "Quality Management Theories and Their Applications." Quality 30 (January 1991): 15-18.
- Covey, Stephen R. Principle-Centered Leadership, Fireside Edition. New York: Simon & Schuster Inc., 1992.
- Crosby, Philip B. Let's Talk Quality. New York: McGraw-Hill Publishing Company, 1989.
- _____. Quality Is Free. New York: Mentor Books, 1980.
- Deming, W. Edwards. Out of the Crisis. Cambridge, MA: Massachusetts Institute of Technology, Center for Advanced Engineering Study, 1982.
- Elig, Timothy W. 1991/1992 Surveys of Total Army Military Personnel. Alexandria, VA: U.S. Army Research Institute, September 1992.
- Elig, Timothy W. and Kenneth A. Martell. 1990 Army Career Satisfaction Survey. Alexandria, VA: U.S. Army Research Institute, October 1990.
- Fitton, Robert A., ed. Leadership. San Francisco: Westview Press, 1990.
- Gabor, Andrea. The Man Who Discovered Quality. New York: Random House, Inc., 1990.
- Juran, Joseph M. Juran on Leadership for Quality. New York: The Free Press, Macmillan, Inc., 1989.
- Kast, Fremont E., and James E. Rosenzweig. Organization and Management, 4th ed. New York: McGraw-Hill Book Company, 1985.
- Mann, Nancy R. The Keys to Excellence. 3rd ed. Los Angeles: Prestwick Books, 1989.

- National Security Agency. "Quality: A New Understanding." Managing Total Quality, 3rd ed. Fort Meade, MD: National Security Agency, 1988.
- Neave, Henry R. The Deming Dimension. Knoxville, TN: SPC Press, Inc., 1990.
- Powell, Colin L. "Message from the Chairman." In Joint Warfare of the U.S. Armed Forces, i. Joint Chiefs of Staff Publication 1. Washington, National Defense University Press, 1991.
- Richards, John D. "The Role of Leadership in TQM." Military Review 72, no. 8 (August 1992): 84-87.
- Rousek, Charles S., ed. Army Command, Leadership, and Management. Carlisle Barracks, PA: U.S. Army War College, 1992.
- Sanford, Carol. "A Self-Organizing View of Paradigms." In New Traditions in Business, ed. John Renesch, 193-206. San Francisco: Brerrett-Koehler Publishers, 1992.
- Schein, Edgar H. Organizational Culture and Leadership. San Francisco: Jossey-Bass Publishers, 1985.
- Scherkenbach, William W. The Deming Route to Quality and Productivity. Washington: CEEPress Books, 1988.
- Scholtes, Peter R., and Hero Hacquebord. "Beginning the Quality Transformation." Quality Progress 21 (July 1988): 28-33.
- Shalikashvili, John M. "Selection Board Members Agree: The New NCO-ER is a Winner." Memorandum for Record. Fort Benjamin Harrison, 1989.
- Stone, Michael P. W., and Gordon R. Sullivan. Strategic Force, Strategic Vision for the 1990s and Beyond: A Statement of the Posture of the United States Army, Fiscal Year 1993. Posture Statement presented to the 102d Cong., 2d sess. Washington: U.S. Department of the Army, 1992.
- Swiss, James E. "Adapting Total Quality Management (TQM) to Government." Public Administration Review 52, no. 4 (July/August 1992): 356-362.
- Thompson, John W. "Corporate Leadership in the 21st Century." In New Traditions in Business, ed. John Renesch, 209-222. San Francisco: Brerrett-Koehler Publishers, 1992.
- U.S. Government Accounting Office. Organizational Culture. Report to the Chairman on Governmental Affairs, U.S. Senate, by Donna M. Heivilin. Washington: Government Accounting Office, 1992.
- U.S. Department of Defense. Total Quality Master Plan. Washington: Department of Defense, 1988.

U.S. Department of the Army. Army Focus 1992. Washington:
Department of the Army, 1992.

_____. Army Management Philosophy. Army Regulation 5-1.
Washington: Department of the Army, 12 June 1992.

_____. Commissioned Officer Professional Development and
Utilization. Department of the Army Pamphlet 600-3.
Washington: Department of the Army, 29 August 1989.

_____. Leadership and Command at Senior Levels. Field Manual
22-103. Washington: Department of the Army, June 1987.

_____. Military Leadership. Field Manual 22-100. Washington:
Department of the Army, July 1990.

_____. Noncommissioned Officer Evaluation and Reporting
System. Army Regulation 623-205. Washington: Department of
the Army, 30 April 1992.

_____. Officer Assignment Policies, Details, and Transfers.
Army Regulation 614-100. Washington: Department of the Army,
17 October 1990.

_____. Officer Evaluation and Reporting System. Army
Regulation 623-105. Washington: Department of the Army, 30
April 1992.

_____. Operations. Field Manual 100-5. Washington: Department
of the Army, May 1986.

_____. The Army. Field Manual 100-1. Washington: Department of
the Army, December 1991.

_____. Training the Force. Field Manual 25-100. Washington:
Department of the Army, November 1988.

Whigham, John A. "Lieutenant Colonel Promotion Board." Memorandum
for the Commanding General, U.S. Signal Center and School.
Fort Gordon, 6 April 1987.

Wilson, James Q. Bureaucracy. New York: Basic Books, 1989.